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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/674,355	01/15/2001	Ryo Takeda	851663.417US	5240

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EXAMINER	
TRAN, TRANG U	
ART UNIT	PAPER NUMBER
2614	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/674,355	TAKEDA ET AL.	
	Examiner	Art Unit	
	Trang U. Tran	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17,19 and 20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☒ Claim(s) *16-17 and 19-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 02, 2005 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-17 and 19-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipate by Okada (US Patent No. 4,489,349).

In considering claim 14, Okada discloses all the claimed subject matter, note 1) the claimed a brightness limitation control circuit configured to receive a plurality of color reference signals and configured to generate a feedback signal to regulate the brightness of the at least one color-video channel based on detection of a signal level of

a color reference signal having the lowest signal level from among the plurality of color reference signals is met by the minimum value detecting circuit 180, which here includes diodes having their cathodes connected to the cathodes 150R, 150G, and 150B of the cathode ray tube 150 and having their anodes connected to a peak detecting circuit 190 (Fig. 13, col. 10, line 67 to col. 11, line 12).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okada (US Patent No. 4,489,349) in view of Shanley, II et al. (US Patent No. 4,295,166).

In considering claim 15, Okada discloses all the limitations of the instant invention as discussed in claim 14, except for providing the claimed the feedback signal is responsive to a comparison between a reference signal and the minimum signal level from at least one color reference signal from the at least one color video channel. Shanley, II et al teach that a signal input of comparator 55 senses the low level blue (b) signal output of matrix 18, and a reference input of comparator 55 senses both a brightness determinative reference voltage and a beam current control voltage as will be discussed (Fig. 1, col. 3, lines 34-68).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the low level blue (b) signal output as taught by

Shanley, II et al into Okada's system in order to maintain beam limiting capability when normal operation of the control circuit is disrupted.

7. Claims 9-10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shanley, II et al (US Patent No. 4,295,166) in view of Okada (US Patent No. 4,489,349).

In considering claim 9, Shanley, II et al. discloses all the claimed subject matter, note 1) the claimed a comparator that compares said minimum signal level with a fixed voltage reference signal and generates a corresponding output, and an additive feedback coupling of said comparator output signal and each of said color channel reference signals is met by a keyed sampling comparator 55 arranged in a closed automatic brightness and beam current limiting control loop (Fig. 1, col. 3, line 35 to col. 4, line 58).

However, Shanley, II et al explicitly do not disclose the claimed a minimum signal detector that receives a plurality of color channel reference signals as input and is arranged to output, as a minimum signal level, a signal level of a color channel reference signal having the lowest signal level from among the plurality of color channel reference signals.

Okada teaches that the matrix circuit 130 provides decoded primary color signals R, G, and B to the cathodes 150R,150G, and150b and also to a minimum value detecting circuit 180, which here includes diodes having their cathodes connected to the cathodes 150R, 150G, and 150B of the cathode ray tube 150 and having their anodes connected to a peak detecting circuit 190, the output of the peak detecting circuit 190

then controls the gain of the gain control circuits 170Y and 170C (Fig. 13, col. 10, line 67 to col. 11, line 12).

Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the minimum value detecting circuit as taught by Okada into Shanley, II et al's system in order to accurately detecting the minimum level of the color channels.

In considering claim 10, the claimed comprising a brightness control circuit for adjusting the video signal brightness level by manual adjustment of said color channel reference signals, wherein said additive feedback coupling of said comparator output signal is coupled through said brightness control circuit is met by the brightness determinative D.C. level of each of the r, g, b signals can be varied by varying the levels of the signals applied to the reference signal input of comparator 55 (col. 3, lines 42-66).

Claim 13 is rejected for the same reason as discussed in claim 9.

8. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sano et al. (US Patent No. 5,400,086) in view of Shanley, II et al. (US Patent No. 4,295,166) and further in view of Okada (US Patent No. 4,489,349).

In considering claim 1, Sano et al. discloses all the claimed subject matter, note 1) the claimed for a plurality of color channels, a control circuit and clamping circuit for generating a color channel reference signal and controlling a color channel video signal for each color channel, and a brightness limitation circuit coupled to receive the color channel reference signal from each of the color channels and coupled to provide a feedback signal to regulate a brightness level of each video signal according to a

comparison of a signal level selected from among the color channel reference signals and a fixed reference signal level is met by the comparisons 59R, 59G and 59B (Fig. 21, col. 16, line 18 to col. 17, line 5).

However, Sano et al explicitly do not disclose the claimed a minimum signal detector that receives the color channel reference signals as input and is arranged to output, as a minimum signal level, a signal level of a color channel reference signal having the lowest signal level from among the color channel reference signals, and a comparison of a minimum signal level selected from among the color channel reference signals and a fixed reference signal level.

Shanley, II et al teach that a signal input of comparator 55 senses the low level blue (b) signal output of matrix 18, and a reference input of comparator 55 senses both a brightness determinative reference voltage and a beam current control voltage as will be discussed (Fig. 1, col. 3, lines 34-68).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the low level blue (b) signal output as taught by Shanley, II et al into Sano et al's system in order to maintain beam limiting capability when normal operation of the control circuit is disrupted.

Additionally, Okada teaches that the matrix circuit 130 provides decoded primary color signals R, G, and B to the cathodes 150R,150G, and150b and also to a minimum value detecting circuit 180, which here includes diodes having their cathodes connected to the cathodes 150R, 150G, and 150B of the cathode ray tube 150 and having their anodes connected to a peak detecting circuit 190, the output of the peak detecting

circuit 190 then controls the gain of the gain control circuits 170Y and 170C (Fig. 13, col. 10, line 67 to col. 11, line 12).

Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the minimum value detecting circuit as taught by Okada into Sano et al's system in order to accurately detecting the minimum level of the color channels.

In considering claim 2, note 1) the claimed wherein the brightness limitation circuit comprises a minimum detection circuit for detecting and outputting a minimum signal level from amongst the color channel reference signals, and a comparator having as inputs said fixed reference signal level and said minimum signal level, and producing said feedback signal as output is met by Fig. 1, col. 3, lines 34-68 of Shanley, II et al, and 2) the claimed wherein the brightness limitation circuit comprises a minimum detection circuit formed with diodes for detecting is met by the minimum value detecting circuit 180, which here includes diodes having their cathodes connected to the cathodes 150R, 150G, and 150B of the cathode ray tube 150 and having their anodes connected to a peak detecting circuit 190 (Fig. 13, col. 10, line 67 to col. 11, line 12 of Okada).

In considering claim 3, the claimed wherein said comparator is coupled to receive said minimum signal level at its negative input and said fixed reference signal level at its positive input is met by the comparisons 59R, 59G and 59B (Fig. 21, col. 16, line 18 to col. 17, line 5 of Sano et al).

In considering claim 4, the claimed wherein each said control circuit includes a plurality of adders coupled in the signal path of the corresponding color channel

reference signal, and wherein said feedback signal is coupled as input to one of said adders is met by the brightness control by adding circuits 56R, 56G, and 56B, or 58R, 58B and 58G (Fig. 21, col. 16, lines 18-31 of Sano et al).

In considering claim 5, the claimed wherein said feedback signal is coupled from the brightness limitation circuit to the control circuit by way of a brightness control circuit which enables manual brightness adjustment of the color channels is met by the brightness determinative D.C. level of each of the r, g, b signals can be varied by varying the levels of the signals applied to the reference signal input of comparator 55 (col. 3, lines 42-66 of Shanley, II et al).

In considering claim 6, the claimed wherein said brightness control circuit incorporates an adder for combining the feedback signal with a manual brightness adjustment signal is met by ~~is met by~~ the gain controlled amplifier 24 (Fig. 1, col. 3, lines 42-66 of Shanley, II et al).

In considering claim 7, the claimed further including at least one cut-off adjustment circuit coupled to provide input to a respective adder in the signal path of the color channel reference signal in each control circuit is met by the level compensation circuit for cut-off adjustment 11R, 11G and 11B (Fig. 1, col. 2, lines 28-45 of Sano et al).

In considering claim 8, the claimed wherein each said control circuit includes an adder circuit coupled in the signal path of the corresponding color channel video signal, and wherein a feedback signal from said clamping circuit, generated according to the color channel video signal and the color channel reference signal, is coupled as input to

the adder circuit is met by the adding circuits 56 R, 56G and 56 B (Fig. 21, col. 16, lines 18-38) of Sano et al.

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sano et al. (US Patent No. 5,400,086) in view of Okada (US Patent No. 4,489,349).

In considering claim 11, Sano et al. discloses all the claimed subject matter, note 1) the claimed a plurality of color channel control means each coupled to receive as input a respective color channel video signal and color channel reference signal and to generate a respective adjusted color channel video signal and adjusted color channel reference signal is met by the brightness control by adding circuits 56R, 56G, and 56B, or 58R, 58B and 58G (Fig. 21, col. 16, lines 18-31), 2) the claimed a plurality of clamping means, each clamping means corresponding to a respective color channel control means and coupled to receive as input the respective adjusted color channel video signal and adjusted color channel reference signal and to produce a corresponding clamping feedback signal is met by the clamp circuits of the level compensation circuit (Figs. 21, 22 and 37, col. 16, lines 32-38 and col. 26, lines 5-61), 3) the claimed a brightness limitation means coupled to receive the adjusted color channel reference signal from each color channel control means to produce a corresponding brightness feedback signal is met by the brightness control circuit or the white balance control circuit 33 (Fig. 21, col. 16, line 32 to col. 37, line 5), and 4) the claimed wherein each said color channel control means includes a first adder in path of the color channel video signal, to which said clamping feedback signal is coupled, and a second adder in the path of the color channel reference signal, to which said brightness

feedback signal is coupled is met by the brightness control by adding circuits 56R, 56G, and 56B, or 58R, 58B and 58G (Fig. 21, col. 16, lines 18-31).

However, Sano et al explicitly do not disclose the claimed brightness feedback signal based on a detection of a signal level of a color channel reference signal having a lowest signal level among the plurality of adjusted color channel reference signals.

Okada teaches that the matrix circuit 130 provides decoded primary color signals R, G, and B to the cathodes 150R,150G, and150b and also to a minimum value detecting circuit 180, which here includes diodes having their cathodes connected to the cathodes 150R, 150G, and 150B of the cathode ray tube 150 and having their anodes connected to a peak detecting circuit 190, the output of the peak detecting circuit 190 then controls the gain of the gain control circuits 170Y and 170C (Fig. 13, col. 10, line 67 to col. 11, line 12).

Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the minimum value detecting circuit as taught by Okada into Sano et al's system in order to accurately detecting the minimum level of the color channels.

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sano et al. (US Patent No. 5,400,086) in view of Okada (US Patent No. 4,489,349) and further in view of Shanley, II et al. (US Patent No. 4,295,166).

In considering claim 12, the claimed wherein said brightness limitation means comprises a minimum signal level detector or detecting the minimum signal level from among the plurality of adjusted color channel reference signals. However, the

combination of Sano and Okada explicitly do not disclose the claimed a comparator for generating said brightness feedback signal on the basis of the detected minimum signal level and a fixed reference signal level. Shanley, II et al teach that a signal input of comparator 55 senses the low level blue (b) signal output of matrix 18, and a reference input of comparator 55 senses both a brightness determinative reference voltage and a beam current control voltage as will be discussed (Fig. 1, col. 3, lines 34-68).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the low level blue (b) signal output as taught by Shanley, II et al into the combination of Sano et al and Okada's system in order to maintain beam limiting capability when normal operation of the control circuit is disrupted.

Allowable Subject Matter

11. Claims 16-17 and 19-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang U. Tran whose telephone number is (571) 272-7358. The examiner can normally be reached on 8:00 AM - 5:30 PM, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

November 9, 2005

Trang U. Tran
Examiner
Art Unit 2614